BALLY/FIDELITY have stopped negotiations as of about the first of March. Apparently there were four or five items on which they could not reach agreement and so Bally is again looking for a buyer.

WELL, that puts us back to December with regard to an Add-On, and we are doing some rethinking, again, about it. Hopefully more next time.

PROJECT ONE is proceeding on schedule, and barring unforseen difficulties, should be available by August.

BALLY/TRS-80 INTERFACE is being worked on, with up to 4K RAM. I'm interested in hearing from those who will have use for this.

FIFTH WEST COAST COMPUTER FAIRE was held last weekend, up in San Francisco. SEBREE's COMPUTING had a booth there, ably manned by Tim Hays. Tim had a couple of TV's going showing his products, and the new handcontroller. One machine had a talking machine added to it (Speak'N'Spell type). Tim reported that he was still working on the light pen and the ultrasonic generator (for actuation of external devices).

PRINTER by XYMEC has been advertised as workable with the Bally, but I have not checked it out because it costs $2800. in serial form, and I didn't have enough petty cash...

LIGHT PEN diagrams have turned up here, now and then, but no one has yet come up with a reliable scheme that is not affected by noise or ambient light.

HAND CONTROLLER by Tim Hays. SEBREE's is marketing Tim's hand controller system. Actually, the box (3½x6x2) contains two sets of controller functions. The two rows of buttons across the bottom generate the JX and JY commands; the buttons on the side and top provide TR, and the joystick will give the KN. (One KN is horizontal movement, the other KN is vertical movement.) Component used are high-quality micro-switch pushbuttons, and the joystick is similar to ones used in radio-controls for airplanes, etc. I mentioned that my joystick had all the possible KN values(-128 to 127) at the center of the available sweep and Tim acknowledged that different resistors would be installed on the production models.
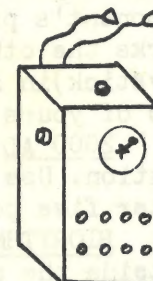
TV MONITOR printed in the last issue has been operated by a couple of subscribers, but a question of safety has come up that perhaps I should have mentioned before. The TV to be used must have an isolated chassis, preferably with a transformer power supply. An alternative would be to use opto-isolators in the circuit. Monitors are usually 'safe', but one should check the monitor input against the 110v wall socket with a voltmeter.

NEAR FAILURE was reported by a subscriber who had bad results with setting &(9)=-42. Lots of screen garbage, but no way to get rid of it, including unplugging from the wall socket. After 'resting' for a couple of hours, he set &(9)=30 and a reset, and it seemed to go back to normal - for a day.

NEW BOOKS recommended by one of our more knowledgeable subscribers for those who want to delve into the operation of the Bally's microprocessor. These should be available at radio/electronics stores, computer shops, or directly from the publisher, Howard W. Sams & Co., 4300 West 62nd St. Indianapolis, IN 46268
  #21634 Crash Course on Microprocessing ($17.50)
  #21609 & #21610, Z80 Microprocessor Interfacing & Programming, Vol I & II (21.95set)

MEMORY TUTORIAL II

ROM (or Read Only Memory) as mentioned before, is an accumulation of memory locations that can be read only, not changed in any way, and is generally used to store permanent Operating Systems, games, instructions, etc. These are manufactured at some factory and usually provided with a purchased computer. The Bally games are on individual ROMs. The ROM is analogous to a phonograph record, fixed.

It became evident that it would be very appealing if one could make his own ROM, starting with an empty set of memory locations, filling them up with a program one wanted to keep, and making it permanent. So the PROM, or PROGRAMMABLE ROM was developed. With this system, the empty PROM is placed in a "PROM BURNER", and the program data entered in machine language. The program is first entered by hand into a RAM and checked out to see that it is correct. Then each byte of data is sequentially entered into its proper address in the PROM and a "burn" current is applied for a very small fraction of a second, 'setting' the data permanently. A new address is called, the proper byte of data entered, the current applied, etc., etc. It might take two minutes or so to load 8K of memory. The PROM is then analogous to a tape cassette recording with the little tab on the back removed to make erasure impossible.

A later development was the EPROM, or ERASABLE PROM, which allows the home user to reinstate the empty status of all the address locations by exposing the window in the top of the EPROM to ultraviolet light for a short period of time. This 'heals' all the burnt connections of the EPROM. This is analogous to using a bulk eraser on a tape cassette recording.

PROGRAMS in this issue:

O-JELLO by Clyde Perkins is a version of Othello. The object is to have as many of your pieces on the board as possible. Your play is to 'capture' as many of the opponent's pieces as possible - this converts them to your pieces. (Of course, it works the other way, too.) You do this by placing a piece (with the hand controller joystick) in a spot adjacent to the opponent's, where his is now sandwiched between two of yours - press the trigger.

2000 AD by Ed Larkin is a shoot-em-up between an alien invader ship an a ground station. Use the knob to aim, the trigger to fire, and the joystick to move about. After five points use TR(1) to restart.

BIORYTHM by Dave Walter is a version that stores the data for the three graphs outside the program in string locations, and then directs their printing in the proper place on the screen. The sine wave is therefore quite accurately portrayed. In addition, it is fast moving. To load the string data, load this on tape and save before the program is manually loaded:

```
10 FOR A=∅ TO 86
20 PRINT #1,"@(",A,")=",
30 INPUT @(A)
40 NEXT A
```

After punching in the program load the string from the tape. The program is now complete. Dump to tape as follows: :PRINT;LIST;FOR A=∅ TO 86;PRINT #1, "@(",A,")=", @(A); NEXT A; PRINT "CLEAR;RUN
Then load back to Bally and the program will be selfstarting.

AN INDEX TO VOLUME I is included in this issue. For those of you who do not have this historical document(?), it is available at $10.ppd.

CATALOG OF ESOTERIC SOFTWARE is offerred by Anderson Research. This free item includes cryptography, chess, sports car rallying & operational programs such as the sample on p. 39. See their ad on the back page.

LETTERING in different formats is always of interest, as we can liven up programs with unique presentations. The following program provides you with two versions of lower case, from Anderson Research.

```
1 .ARCADIAN SAMPLER-A.R.D.
10 CLEAR ;S=0;J=40;A=17996
20 FOR B=1TO 8;GOSUB J+B;%(A)=C;%(A+40)=D;%(A+80)=E;%(A+120)=F;%(A+160)=G;%(A+
200)=H;%(A+240)=I;A=A+2;NEXT B
25 S=S+1
30 J=50;A=18316;IF S=2STOP
40 GOTO 20
41 C=0;D=0;E=170;F=2;G=170;H=130;I=170;RETURN
42 C=0;D=0;E=170;F=130;G=128;H=128;I=128;RETURN
43 C=0;D=0;E=170;F=130;G=128;H=130;I=170;RETURN
44 GOSUB 41;RETURN
45 C=2;D=2;E=170;F=130;G=130;H=130;I=170;RETURN
46 C=32;D=0;E=32;F=32;G=32;H=32;I=32;RETURN
47 GOSUB 41;RETURN
48 C=0;D=0;E=170;F=130;G=130;H=130;I=130;RETURN
51 C=0;D=0;E=44;F=130;G=42;H=130;I=170;RETURN
52 C=0;D=0;E=44;F=130;G=128;H=128;I=128;RETURN
53 C=0;D=0;E=44;F=130;G=128;H=130;I=44;RETURN
54 GOSUB 51;RETURN
55 C=2;D=2;E=42;F=130;G=130;H=130;I=42;RETURN
56 C=32;D=0;E=32;F=32;G=32;H=32;I=32;RETURN
57 GOSUB 51;RETURN
58 C=0;D=0;E=136;F=162;G=130;H=130;I=130;RETURN
```

WHILE this one from Tim Hays adds some sound effects. He wonders if you can figure out what it does by just looking at it. You can get letters 5x normal size.

```
1 CLEAR ;.WEIRD! - BY TIM HAYS
10 @(1)=97;@(2)=87;@(3)=73;@(4)=69;@(5)=82;@(6)=68;@(7)=33
20 INPUT "LETTER SIZE?"L;CLEAR ;BC=0;FC=134;&(10)=140;CY=-30;FOR A=1TO 7;TV=@(
A);NEXT A
30 &(16)=100;&(21)=79;&(22)=255
40 NT=0;FOR X=-80TO 160cL-80;FOR Y=-33TO -27
50 IF PX(X,Y)BOX (X+81)bL-79,(Y+30)bL,L,L,1
60 D=RND (3)+16;&(D)=RND (150)+10
70 NEXT Y;NEXT X
80 BOX -59,-30,42,9,2;&(10)=174;&(22)=0;&(21)=0
```

SAUCER BATTLE CORRECTION (p.2) requires the completion of the BOX command in line 920. There should be a 2 in the space just before ;NEXT P This was a goof on my part for not completing a correction.

SPACE WAR CORRECTION? (p.31) was just brought to my attention, but I don't have the answer as yet. Line 130 appears to be missing - I haven't had a chance to talk to the author yet. This is one of the subtle problems in program checking, you may never hit the circumstance that requires a particular subroutine or branch while you are doing a check - but someone else does. (I did check the donated program, of course.)

```
)   5 .    O-JELLO
    6 . BY CLYDE PERKINS
    8 :RETURN ;CLEAR ;INPUT " HOW MANY PLAYERS ?"I;I=I-1
   10 :RETURN ;CLEAR ;FOR N=-4TO 4;BOX Nb10,0,1,73,1;BOX 0,Nb9,81,1,1;NEXT N;@(0)
=-1;@(1)=-1
   20 FOR P=1TO 2;A=120bP-181;B=10;GOSUB 370;FOR B=-4TO 5STEP 9;A=(Pb2-3)bBcABS(B
)b5;GOSUB 370;NEXT B;NEXT P;IF I P=1;GOTO 60
   30 @(2)=3;@(3)=5;@(4)=1;@(5)=8;@(7)=9;@(8)=0;@(9)=15;@(12)=-15;@(13)=2;@(17)=9
9
   40 FOR X=0TO 3;FOR Y=0TO X;FOR Z=2TO 50STEP 16;FOR W=1TO 4STEP 3
   50 @(XbW+Yb(5-W)+Z)=@(X+Yb4+2);NEXT W;NEXT Z;NEXT Y;NEXT X;P=1
   60 GOSUB 180;E=0;F=0;GOSUB 120;GOSUB 410
   70 BOX E,F,3,3,3;G=E;H=F;E=E+JX(P)b3;F=F+JY(P)b3;BOX G,H,3,3,3;IF TR(P)=0GOTO
70
   80 X=(G+90)c10b10-85;Y=(H+90)c9b9-85;IF (ABS(X)>35)+(ABS(Y)>32)GOTO 140
   90 IF PX(X+3,Y)GOTO 110
  100 S=-10;GOSUB 210;IF Q P=(P=1)+1;GOSUB 180;GOTO 150-90b(I#0)
  110 GOSUB 130;PRINT "OOPS",;FOR N=0TO 1000;NEXT N;GOSUB 120;GOTO 70
  120 GOSUB 130;BOX CX+9,CY,27,9,2;RETURN
  130 CX=120bP-189;CY=0;NT=3;RETURN
  140 GOSUB 130;PRINT "PASS",;GOSUB 170;P=2-(P#1);IF (P=1)+(I#0)GOTO 60
  150 P=2;GOSUB 410;GOSUB 200;P=2;IF V#0X=C;Y=D;S=-10;GOSUB 210;P=1;GOTO 420
  160 GOTO 140
  170 IF PX(-69,0)=PX(51,0)GOTO 190
  180 IF @(0)+@(1)#64RETURN
  190 BOX 0,0,59,17,2;CX=-23;CY=0;PRINT "GAME OVER",;I=KP-49;RUN
  200 P=0;V=0;FOR Y=32TO -31STEP -9;S=0;FOR X=-35TO 35STEP 10;M=10;IF PX(X+3,Y)M=
-10;GOTO 240
  210 Q=0;FOR U=X+STO X+10STEP 10;FOR W=Y-9TO Y+9STEP 9;IF PX(U+3,W)IF PX(U,W)=(P
=1)GOTO 250
  220 NEXT W;NEXT U;IF PRETURN
  230 IF Q A=X;B=Y;GOSUB 390;Q=Q+R;IF V<Q V=Q+RND (9)-7;C=X;D=Y
  240 S=M;NEXT X;NEXT Y;RETURN
  250 Z=0;IF U<XGOTO 270
  260 IF M>=U-X M=U-X-10
  270 GOSUB 400;MU=RND (26)+64;A=X;B=Y;FOR L=1TO 8;A=A+U-X;B=B+W-Y;IF PX(A+3,B)=0
GOSUB 400;GOTO 220
  280 IF PX(A,B)=(P#1)GOTO 320
  290 IF P=0GOSUB 390;Z=Z+R;NEXT L
  300 IF ZGOSUB 360
  310 NEXT L
  320 IF P=0Q=Q+Z+99b(Q=0);GOSUB 400;GOTO 220
  330 IF ZGOTO 220
  340 IF Q=0A=X;B=Y;GOSUB 370
  350 Z=1;Q=1;GOTO 270
  360 T=2-P;N=-1;BOX A,B,7,6,2;GOSUB 380
  370 T=P-1;N=1;FOR E=3TO 7STEP 2;BOX A,B,E,9-E,3;NEXT E;BOX A,B,2bP+1,2bP,3-P;NT
=3;MU=90-Pb4
  380 CX=120bT-63;CY=20;@(T)=@(T)+N;NT=0;PRINT #2,@(T),;RETURN
  390 O=ABS(B)c9b4+ABS(A)c10+2+32b(B<0)+16b(A<0);R=@(O);RETURN
  400 BOX X,Y,3,2,(P=0)b3;RETURN
  410 BOX 0,-40,160,7,2;GOSUB 120;CY=-40;PRINT " ↑",;RETURN
  420 GOSUB 180;FOR B=-31TO 32STEP 63;FOR A=-35TO 35STEP 70;IF PX(A,B)GOSUB 390;@
(O-5)=0
  430 NEXT A;NEXT B;GOTO 60
```

2000 AD by Ed Larkin

```
   1 CLEAR ;BC=0
   2 PRINT "2000 AD";FC=127;FOR E=1TO 1000STEP 2;NEXT E
   3 CLEAR ;FC=0
  10 NT=0;K=0;J=0;B=RND (2)
  15 GOTO 70
  20 BOX 0,-22,160,1,1
  30 BOX 0,-9,160,1,1
  40 BOX 0,0,160,1,1
  50 BOX 0,6,160,1,1
  60 BOX 0,8,42,1,1;BOX 50,8,40,1,1;BOX -50,8,40,1,1
  65 GOTO 365
  70 LINE 39,6,4;LINE 79,-6,3;LINE 24,6,4
 100 LINE 79,-29,3;LINE 9,6,4;LINE 55,-44,3;LINE 4,6,4
 150 LINE 20,-44,3;LINE 0,6,4;LINE -20,-44,3
 170 LINE -5,6,4
 180 LINE -60,-44,3
 190 LINE -15,6,4
 200 LINE -80,-28,3
 210 LINE -30,6,4
 220 LINE -80,-6,3
 250 LINE -80,14,4;LINE -39,35,3;LINE 0,18,3;LINE 48,41,3
 290 LINE 79,24,3
 295 GOTO 20
 365 FOR T=1TO 180STEP 1;&(10)=T;BC=0;FC=30;NEXT T
 400 Q=8;BC=0;FC=30;&(22)=0
 408 X=X+JX(1)bQ
 410 Y=Y+JY(1)bQ
 411 IF X>79X=72
 414 IF X<-79X=-72
 416 IF Y>42Y=38
 418 IF Y<-42Y=-38
 420 BOX X,Y,6,1,3;BOX X,Y+1,3,1,3;BOX X,Y,6,1,3;BOX X,Y+1,3,1,3
 435 Q=10
 440 D=D+JX(2)bQ
 450 S=S+JY(2)bQ
 452 IF D>79D=75
 454 IF D<-79D=-75
 456 IF S<-41S=-38
 458 IF S>6S=5
 460 BOX D,S,3,3,3;BOX D,S,3,3,3
 480 LINE X,Y,4
 490 H=(KN(1)c16)b10+4
 495 P=(KN(2)c16)b10
 700 IF TR(1)=1GOTO 950
 800 IF TR(2)=1GOTO 1900
 900 GOTO 400
 950 &(16)=18;&(17)=17;&(18)=17;&(19)=14;&(20)=65;&(21)=140;&(22)=151;&(23)=0
1000 FOR F=1TO 2STEP 1
1010 LINE -(H),S,3;LINE X,Y,4;NEXT F
1015 GOSUB 15000
1050 H=-(H)
1052 IF H<D+6IF H>D-6GOTO 1100
1060 GOTO 1900
1100 FOR V=1TO 8STEP 1
1105 LINE D,S,4
1110 LINE D+RND (6),S+RND (4),3;LINE D+RND (6),S+RND (4),3
```

(2000 continued)

```
1115  &(21)=255;&(23)=69;&(16)=77;&(18)=200;&(19)=19;&(22)=36;&(20)=139
1118  NEXT V
1119  GOSUB 15000
1120  K=K+1;IF K=5GOTO 11000
1125  D=0;S=-34
1140  GOTO 1900
1490  GOTO 14050
1900  IF TR(2)=1GOTO 1975
1960  GOTO 400
1975  GOTO 2000
2000  FOR G=1TO 2STEP 1
2002  LINE X,Y,4
2010  LINE D,S,4
2020  LINE P,Y,3
2030  &(16)=0;&(17)=40;&(18)=41;&(19)=41;&(20)=194;&(21)=200;&(22)=43;&(23)=0
2040  NEXT G
2045  GOSUB 15000
2050  IF P<X+7IF P>X-7GOTO 10000
2075  GOTO 400
10000 LINE X,Y,4
10005 U=1
10010 LINE X+4,Y-U+3,3
10015 LINE X,Y-U,3
10019 BOX X,Y-1,1,1,3
10020 LINE X,Y,4
10055 &(16)=108;&(17)=109;&(18)=109;&(19)=104;&(20)=109;&(21)=70;&(22)=9;&(23)=0

10060 FOR U=1TO RND (20)+28STEP 1
10070 LINE X+4,Y-U+3,3
10080 LINE X,Y-U,3
10090 NEXT U
10093 &(21)=255;&(23)=255;&(16)=25;&(17)=99
10094 X=21;Y=30
10095 GOSUB 15000
10096 J=J+1
10097 IF J=5GOTO 11000
10099 X=21;Y=30
10100 GOTO 400
11000 CLEAR ;PRINT "ALIEN INVADERS";PRINT K;PRINT "
AR BASE";PRINT J
12000 GOSUB 15000
13020 PRINT
13030 PRINT
13040 FOR L=16TO 23STEP 1;&(L)=0;NEXT L
14000 PRINT "PRESS     TR 1    TO RESTART
14050 IF TR(1)=1GOTO 1
14075 GOTO 14050
15000 FOR L=21TO 23STEP 1;&(L)=0;NEXT L;RETURN
>
```

Twenty-seven spaces here.

```
 10 :RETURN ;CLEAR ;NT=0;&(9)=60;BC=249;FC=116
 30 CY=12;CX=-30;PRINT "BIO-RYTHYMS
 40 CY=-36;PRINT "    REVISED 1/80 D. WALTER"
 50 NT=10;FOR A=0TO 86;MU=@(A);NEXT A;NT=1;GOTO 200
100 FOR A=1TO 3000;NT=1
110 IF KP GOTO 200
130 NEXT A;BC=1;GOTO 100
190 CY=0;INPUT "MONTH"M,"DAY"D,"YEAR"Y
192 IF D>0IF D<32IF M>0IF M<13RETURN
200 CLEAR ;&(9)=60;BC=250;FC=7
210 CY=24;PRINT "  WHAT IS YOUR BIRTHDATE"
220 PRINT "MONTH,DAY,YEAR,EX-6/10/62"
240 CY=0;GOSUB 190
250 U=D;V=M;W=Y;BC=176
260 CY=24;PRINT "WHAT IS TODAY'S DATE       "
270 BOX -60,-8,41,28,2;CY=0;GOSUB 190
280 FOR A=0TO 86;NT=3;MU=A;NEXT A
290 Q=Y-W;K=V;L=M
295 IF V>M K=M;IF V>M L=V
300 T=Qb365+Qc4
302 IF K=LGOTO 360
305 IF V>M T=-T
310 FOR R=KTO L-1
320 T=T+30
330 IF R#2IF R#4IF R#6IF R#9IF R#11 T=T+1
340 IF R=2 T=T-2
350 NEXT R
360 T=ABS(T)-(U-D)
370 P=Tc23;P=RM
380 E=Tc28;E=RM+24
390 I=Tc33;I=RM+53
400 CLEAR ;FC=1;BC=125;NT=0;PRINT
415 PRINT "YOU HAVE LIVED",#6,T," DAYS.
420 CY=22
430 PRINT "PHYSICAL INDEX:",#9,@(P)
440 CY=11;X=@(P);GOSUB 1000
450 CY=-2
460 PRINT "EMOTIONAL INDEX:",#8,@(E)
470 CY=-12;X=@(E);GOSUB 1000
490 CY=-26;PRINT "INTELLECTUAL INDEX:",#5,@(I)
500 CY=-36;X=@(I);GOSUB 1000
510 FOR Z=0TO 3000;NEXT Z;CLEAR
525 CY=0;CX=-70;&(9)=-1;FC=117;BC=240
530 PRINT "CYCLES: THE NEXT 25 DAYS"
535 FOR A=0TO 1000;NEXT A;CLEAR ;&(10)=0;BC=0;FC=118
537 &(0)=179;&(1)=179;&(2)=FC;&(3)=FC;GOSUB 1100;&(9)=199;FOR A=0TO 180;&(10)=A
;NEXT A;NT=3
540 CX=-75;CY=@(P);PRINT "P",;GOSUB 750
550 CX=-68;CY=@(E);PRINT "E",;GOSUB 750
560 CX=-61;CY=@(I);PRINT "I",;GOSUB 750
610 LINE -72,@(P),0;A=P;B=23;C=0
630 GOSUB 800
640 LINE -65,@(E),0;A=E;B=52;C=24
660 GOSUB 800
670 LINE -58,@(I),0;A=I;B=86;C=53
690 GOSUB 800
695 NT=3;GOTO 100
750 BOX CX-7,CY,7,9,3
```

```
 770 RETURN
 800 FOR X=-52TO 75STEP 5
 810 &(17)=255
 816 &(22)=15;&(16)=72-@(A)
 820 LINE X,@(A),1
 830 A=A+1;IF A=B A=C
 840 NEXT X;&(22)=0;RETURN
1000 IF X>13PRINT "HIGH"
1010 IF X>=-13IF X<13PRINT " CRITICAL!!!";BOX -43,CY+8,75,11,3
1020 IF X<-13PRINT "LOW"
1030 RETURN
1100 BOX -50,0,1,80,1;U=0;BOX 15,0,129,1,1
1105 L=0
1110 FOR X=-50TO 75STEP 5;BOX X,0,1,3,1
1120 U=U+1
1125 IF U=7GOSUB 1150
1130 NEXT X;RETURN
1150 BOX X,0,1,10,1;L=L+7;CX=X-3;CY=-40;PRINT #1,L,;U=0
1160 U=0;RETURN
@(0)=0
@(1)=10
@(2)=19
@(3)=26
@(4)=32
@(5)=35
@(6)=36
@(7)=34
@(8)=29
@(9)=23
@(10)=14
@(11)=5
@(12)=-5
@(13)=-14
@(14)=-23
@(15)=-29
@(16)=-34
@(17)=-36
@(18)=-35
@(19)=-32
@(20)=-26
@(21)=-19
@(22)=-10
@(23)=0
@(24)=0
@(25)=8
@(26)=16
@(27)=22
@(28)=28
@(29)=32
@(30)=35
@(31)=36
@(32)=35
@(33)=32
@(34)=28
@(35)=22
@(36)=16
@(37)=8
@(38)=0
@(39)=-8
@(40)=-16
@(41)=-22
@(42)=-28
@(43)=-32
@(44)=-35
@(45)=-36
@(46)=-35
@(47)=-32
@(48)=-28
@(49)=-22
@(50)=-16
@(51)=-8
@(52)=0
@(53)=0
@(54)=7
@(55)=13
@(56)=19
@(57)=25
@(58)=29
@(59)=33
@(60)=35
@(61)=36
@(62)=36
@(63)=34
@(64)=31
@(65)=27
@(66)=22
@(67)=16
@(68)=10
@(69)=3
@(70)=-3
@(71)=-10
@(72)=-16
@(73)=-22
@(74)=-27
@(75)=-31
@(76)=-34
@(77)=-36
@(78)=-36
@(79)=-35
@(80)=-33
@(81)=-29
@(82)=-25
@(83)=-19
@(84)=-13
@(85)=-7
@(86)=0
&(10)=176;RUN
>
```

ADS

- I would like to purchase RED BARON, LETTER MATCH, and MATH cartridges.
  Ray Darwinski 2655 Soderblom Ave. San Diego CA 92122 714-453-5520

- FOR SALE Like new Bally Arcade with STAR BATTLE, BLACKJACK, CLOWNS, BASEBALL,
  PANZER ATTACK, SEAWOLF, Z80 ZZAP, FOOTBALL, BASIC & cassette interface –
  a bargain at $375 or best offer. Hal Schmidt 10568 Porto Ct San Diego, CA
  92124 714-571-1485

- COMPUTER EAR is a speech recognition device comparable to Heuristics
  SPEECHLAB and RShack VOXBOX, but at one-third the price, at $59.95 ppd.
  Additional info from Anderson Research & Design. 1611 Lacota Lane,
  Burnsville, MN 55337   612-894-2633 (note, we are in the process of reviewing
  one of these now)

SALVAGE Bally printed circuit boards source has been located. While negotiations
are still underway, it seems like we will be able to provide a fully stuffed,
unused board for $25. BUT. They are SALVAGE from the production line, and
therefore have problems – but they also have lots of usable parts. First off,
the problems are mostly mechanical (poor connections, solder spillage, etc.) or
the problem could be a bad chip. The $25 rate is for a pot-luck, Hobson's choice,
as-is board. We also expect to receive diagnostic equipment with this cache of
goodies and should be able to do some error-correction, therefore making it possible
to provide operating boards, at a higher price - to be determined. The current
price of a Z-80 chip is $10.95, and the custom chips are $20-30 each, so a board
has considerable parts value as well as potential for experimenters, etc. Also,
if you will write in with specific questions about a board that you purchased, we
will attempt to answer the problem since we will have had some repair experience
by then, and we will use the ARCADIAN as a means of dissemination. If you have any
interest in one or a batch (price will get better with reduced shipping charges),
let me know.

Forty-six

ARCADIAN™

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FIRST CLASS